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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,100	12/06/2001	Tadashi Sakamoto	2270-0042	5152

20583 7590 12/28/2004

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222 EAST 41ST ST
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EXAMINER	
SINGH, DALZID E	
ART UNIT	**PAPER NUMBER**
2633	

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/007,100	SAKAMOTO ET AL.	
	Examiner	Art Unit	
	Dalzid Singh	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/171,193.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *April 06 2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. This application filed under former 37 CFR 1.60 lacks the necessary reference to the prior application. A statement reading, "This is a continuation-in-part of Application No. 09/171,193 now patent number US 6,490,064 filed March 17, 1999" should be entered following the title of the invention or as the first sentence of the specification. Also, the current status of all nonprovisional parent applications referenced should be included.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,490,064 (hereinafter "patent 064") in view of Chraplyvy et al (US Patent No. 5,327,516).

Regarding claim 1, patent 064 discloses a wavelength division multiplexed optical transmission system comprising a dispersion-shifted fiber whose zero-dispersion wavelength is in the 1550 nm region, wherein:

among wavelength multiplexed optical signals, the wavelengths of either of at least two optical signals are allocated between 1450 nm and 1530 nm, or between 1570 and 1650 nm (see claim 1).

Patent 064 differs from the claimed invention in that patent 064 does not specifically disclose a maximum absolute value of dispersion coefficient of said dispersion-shifted fiber is 3.5 [ps/(nm-km)] between 1525 and 1575 nm in optical signal wavelengths. However, adjusting dispersion coefficient to such value for a specific range of wavelength is well known. Chraplyvy et al is cited to show such well known concept. In col. 2, lines 23-28, Chraplyvy et al teaches the dispersion value (dispersion coefficient value) of 3.5 ps/nm-km for wavelength range of 1525-1575 nm. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention

was made to adjust the dispersion coefficient to such value. One of ordinary skill in the art would have been motivated to do such in order to reduce or eliminate dispersion.

Regarding claim 2, patent 064 discloses that among said wavelength multiplexed optical signals, the wavelengths of at least two of the optical signals are allocated between 1450 nm and 1530 nm.

Regarding claim 3, patent 064 discloses among said plurality of wavelength multiplexed optical signals, the wavelengths of at least two of the optical signals are allocated between 1570 nm and 1650 nm.

Regarding claim 4, patent 064 discloses among wavelength multiplexed optical signals, the wavelengths of either of at least two optical signals are allocated between 1450 nm and 1530 nm, and between 1570 and 1650 nm.

Regarding claim 5, patent 064 discloses the optical signal whose wavelength is allocated between 1450 nm and 1530 nm and the optical signal whose wavelength is allocated between 1570 nm and 1650 nm propagate along said dispersion-shifted fiber in opposite directions.

Regarding claim 6, patent 064 discloses a wavelength division multiplexed optical transmission system wherein a dispersion-shifted fiber whose zero-dispersion wavelength is in the 1550 nm region, wherein:

the wavelength of multiplexed optical signals are allocated between 1450 nm and 1570 nm, and 1570 nm and 1650 nm;

the optical signal whose wavelength is allocated between 1450 nm and 1570 nm, and the optical signal whose wavelength is allocated between 1570 nm and 1650 nm propagate along said dispersion-shifted fiber in opposite directions; and

at least the optical wavelength differences of the optical signals whose wavelength is 1505 nm or greater and 1565 or less are unequally spaced.

Patent 064 differs from the claimed invention in that patent 064 does not specifically disclose a maximum absolute value of dispersion coefficient of said dispersion-shifted fiber is 3.5 [ps/(nm-km)] between 1525 and 1575 nm in optical signal wavelengths. However, adjusting dispersion coefficient to such value for a specific range of wavelength is well known. Chraplyvy et al is cited to show such well known concept. In col. 2, lines 23-28, Chraplyvy et al teaches the dispersion value (dispersion coefficient value) of 3.5 ps/nm-km for wavelength range of 1525-1575 nm. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to adjust the dispersion coefficient to such value. One of ordinary skill in the art would have been motivated to do such in order to reduce or eliminate dispersion.

Regarding claim 7, patent 064 discloses a wavelength division multiplexed optical transmission system wherein a dispersion-shifted fiber whose zero-dispersion wavelength is in the 1550 nm region, wherein:

the wavelengths of said plurality of multiplexed optical signals are allocated between 1450 nm and 1530 nm and between 1530 nm and 1650 nm, the optical signal whose wavelength is allocated between 1450 nm and 1530 nm, and the optical signal whose wavelength is allocated between 1530 nm and 1650 nm propagate along the

dispersion-shifted fiber in opposite directions, and at least the optical wavelength differences of the optical signals whose wavelength is 1535 nm or greater and 1595 or less are unequally spaced.

Patent 064 differs from the claimed invention in that patent 064 does not specifically disclose a maximum absolute value of dispersion coefficient of said dispersion-shifted fiber is 3.5 [ps/(nm-km)] between 1525 and 1575 nm in optical signal wavelengths. However, adjusting dispersion coefficient to such value for a specific range of wavelength is well known. Chraplyvy et al is cited to show such well known concept. In col. 2, lines 23-28, Chraplyvy et al teaches the dispersion value (dispersion coefficient value) of 3.5 ps/nm-km for wavelength range of 1525-1575 nm. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to adjust the dispersion coefficient to such value. One of ordinary skill in the art would have been motivated to do such in order to reduce or eliminate dispersion.

Regarding claim 8, patent 064 discloses a wavelength division multiplexed optical transmission method in which a dispersion-shifted fiber whose zero dispersion wavelength is in the 1550 nm region is a transmission path, wherein:

among wavelength multiplexed optical signals, the wavelengths of either of at least two optical signals are either allocated between 1450 nm and 1530 nm, or between 1570 and 1650 nm.

Patent 064 differs from the claimed invention in that patent 064 does not specifically disclose a maximum absolute value of dispersion coefficient of said dispersion-shifted fiber is 3.5 [ps/(nm-km)] between 1525 and 1575 nm in optical signal

wavelengths. However, adjusting dispersion coefficient to such value for a specific range of wavelength is well known. Chraplyvy et al is cited to show such well known concept. In col. 2, lines 23-28, Chraplyvy et al teaches the dispersion value (dispersion coefficient value) of 3.5 ps/nm-km for wavelength range of 1525-1575 nm. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to adjust the dispersion coefficient to such value. One of ordinary skill in the art would have been motivated to do such in order to reduce or eliminate dispersion.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chraplyvy et al (US Patent No. 5,587,830) is cited to show high capacity optical fiber network.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272--3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DS
December 16, 2004

M. R. Sedighian

M. R. SEDIGHIAN
PRIMARY EXAMINER